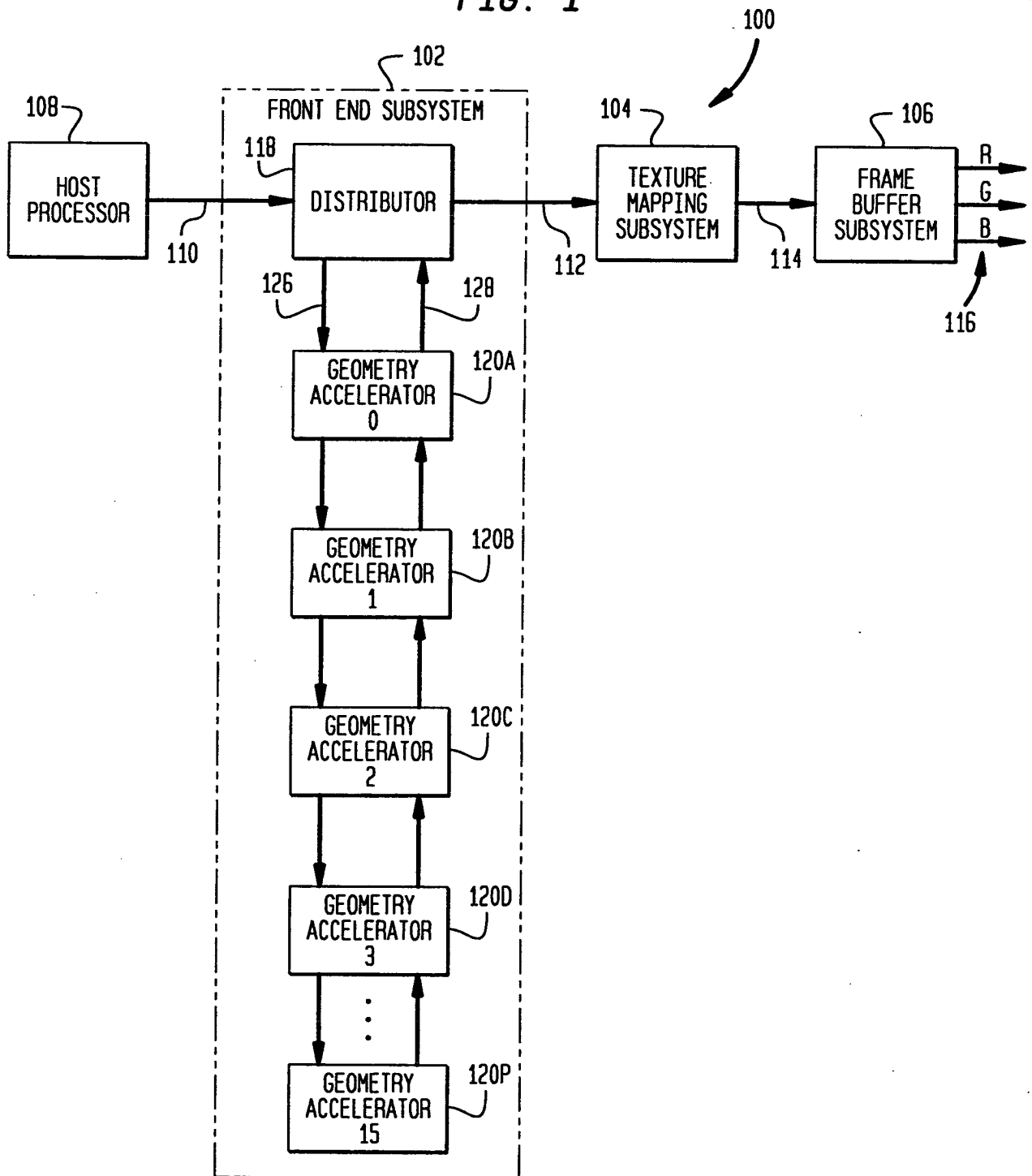


FIG. 1



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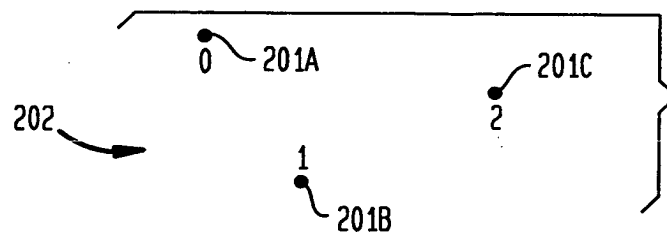


FIG. 2A

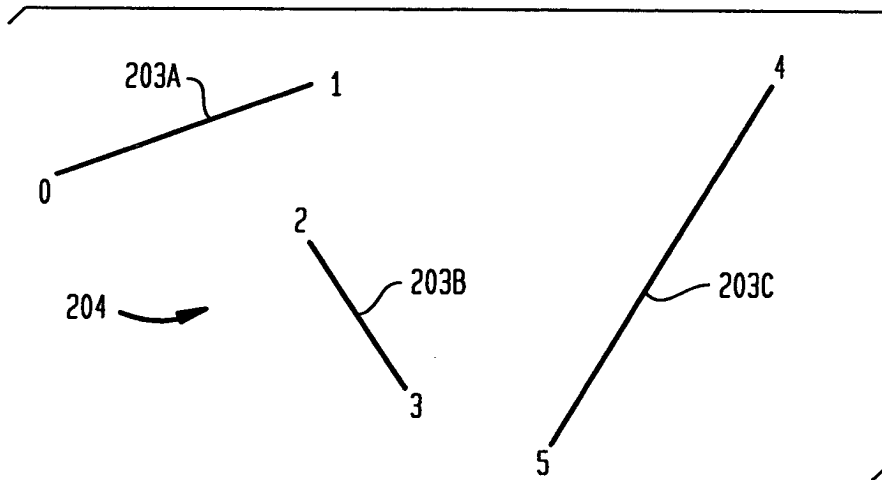


FIG. 2B

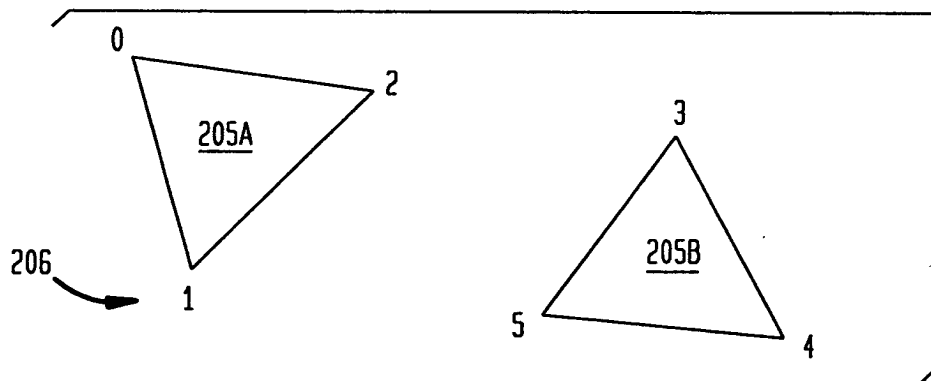


FIG. 2C

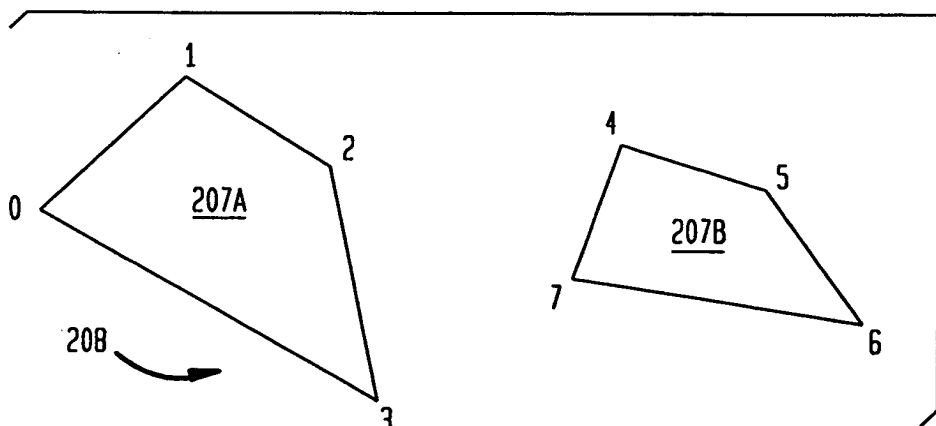


FIG. 2D

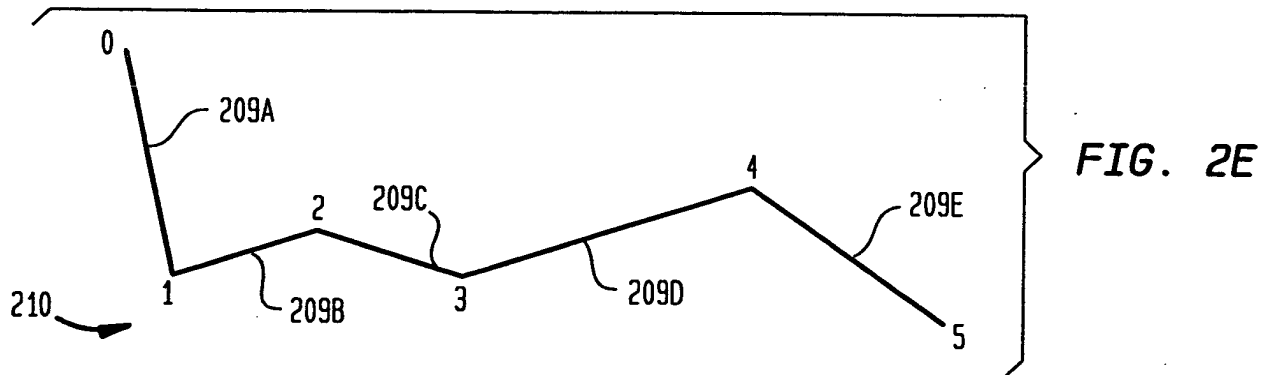


FIG. 2F

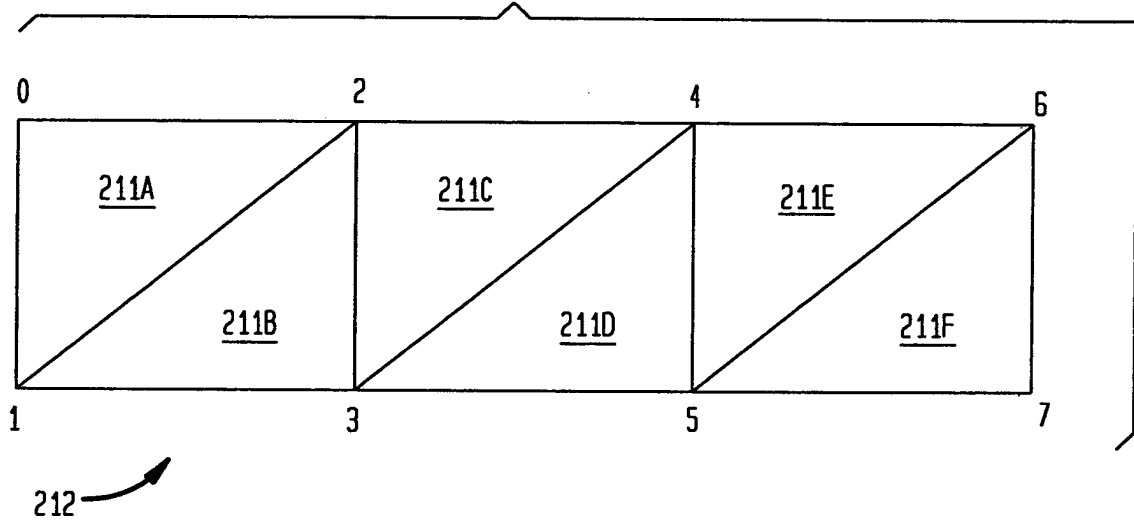
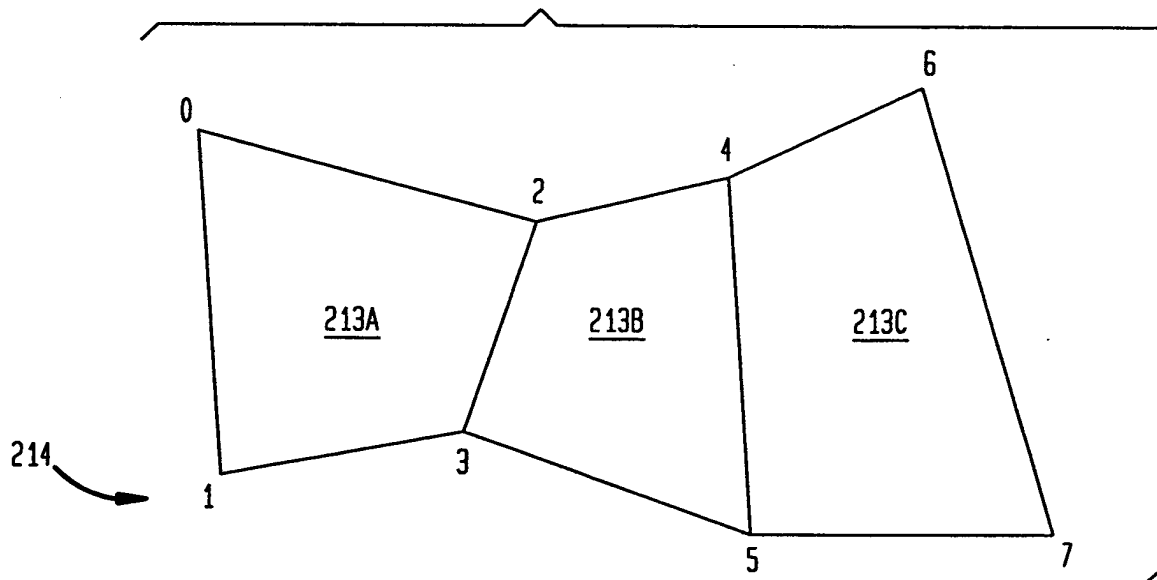
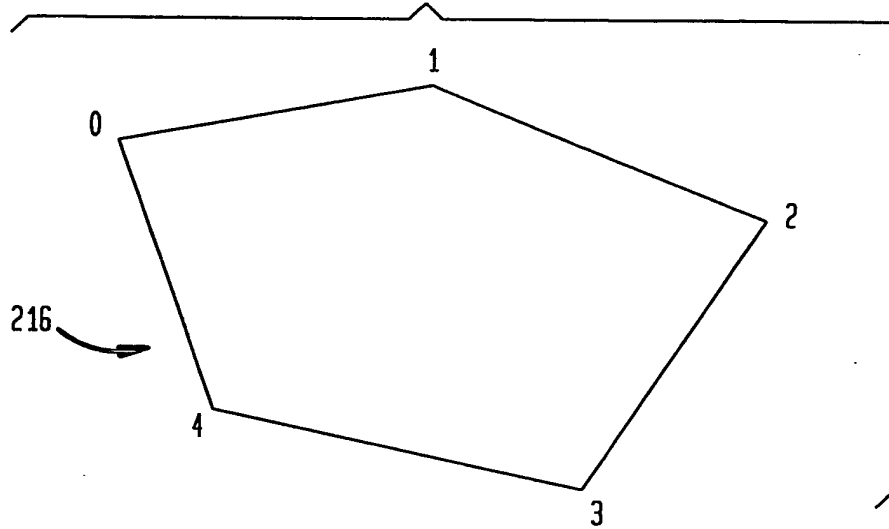


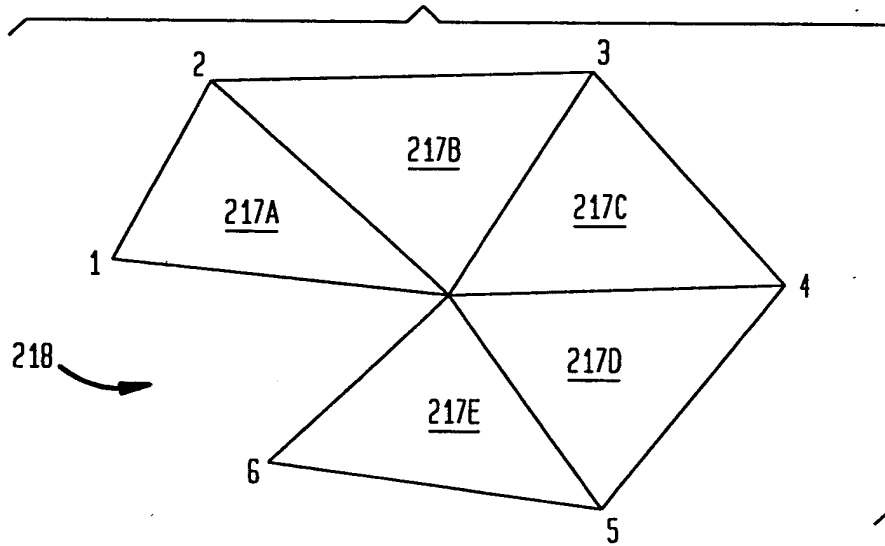
FIG. 2G



**FIG. 2H**



**FIG. 2I**



**FIG. 2J**

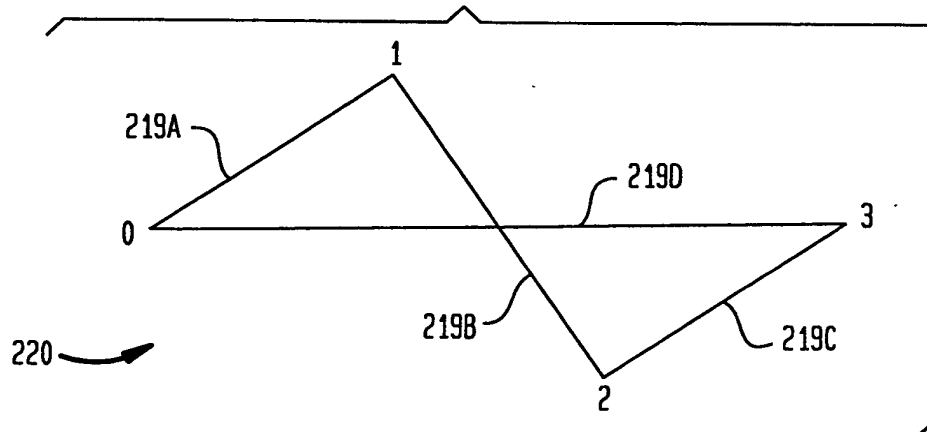


FIG. 3

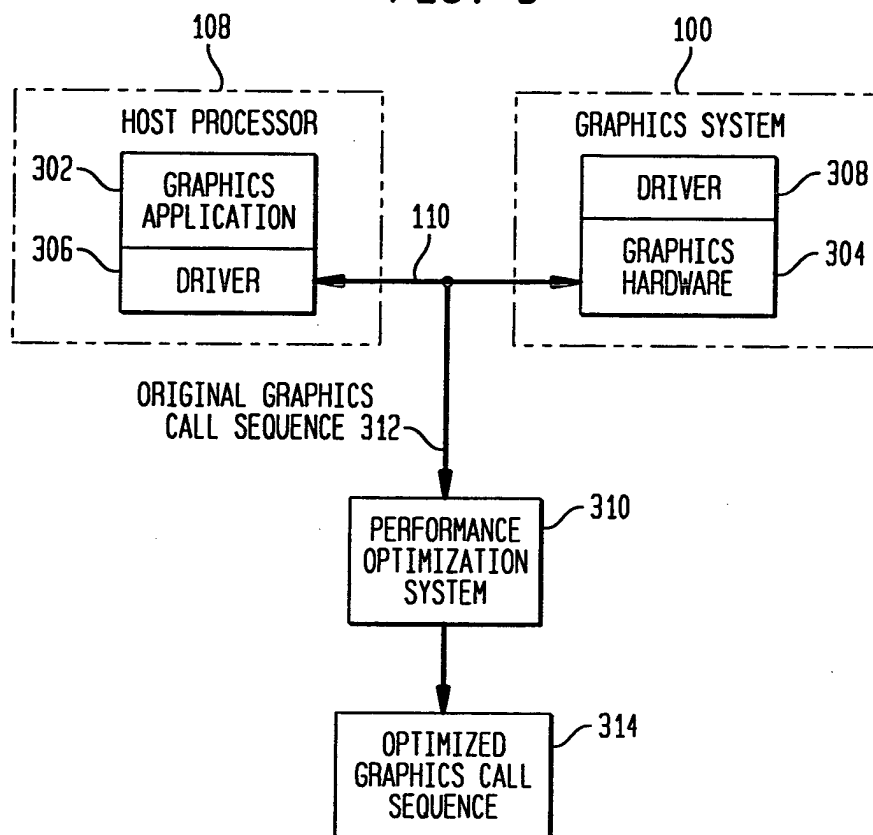


FIG. 4

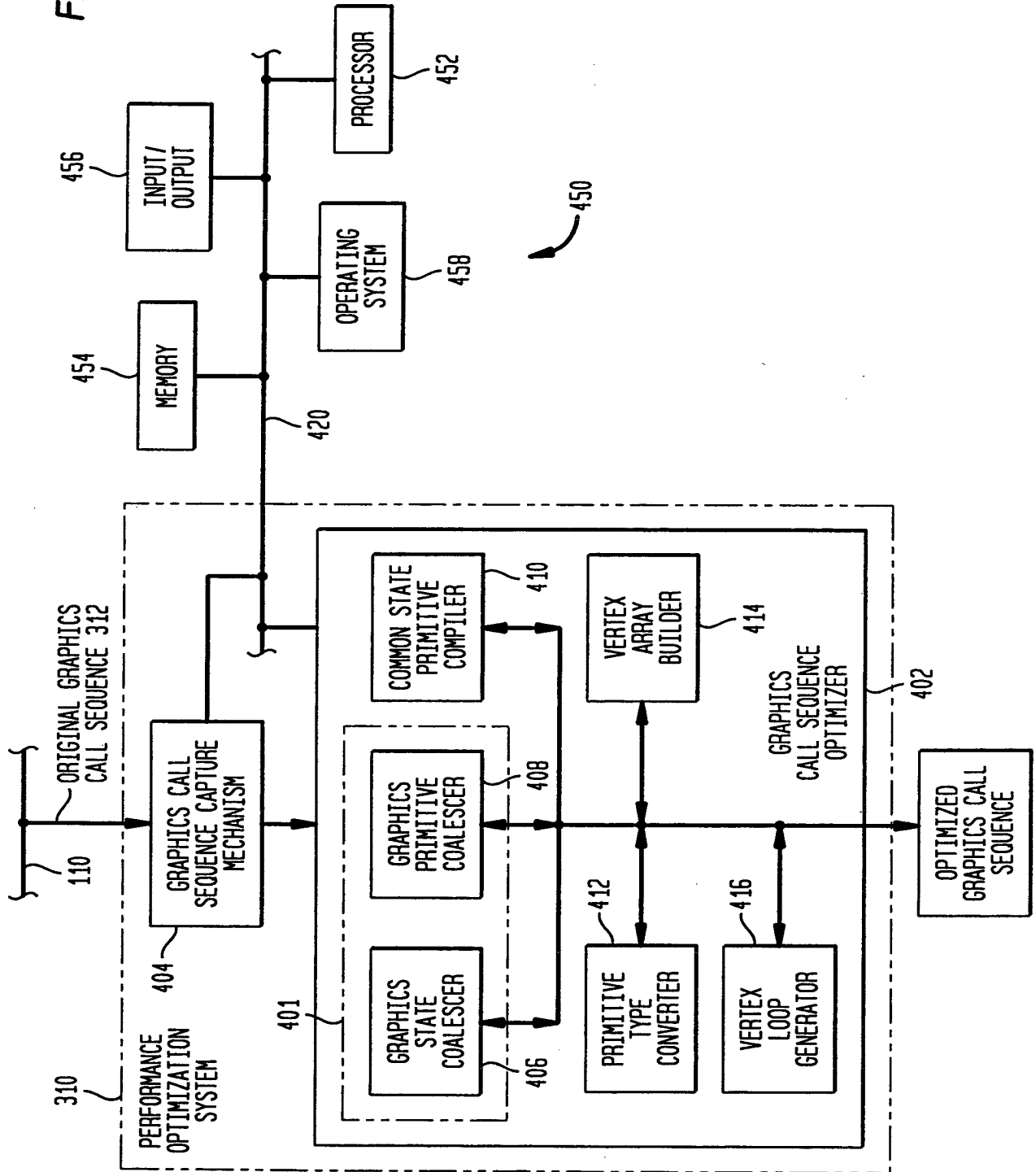
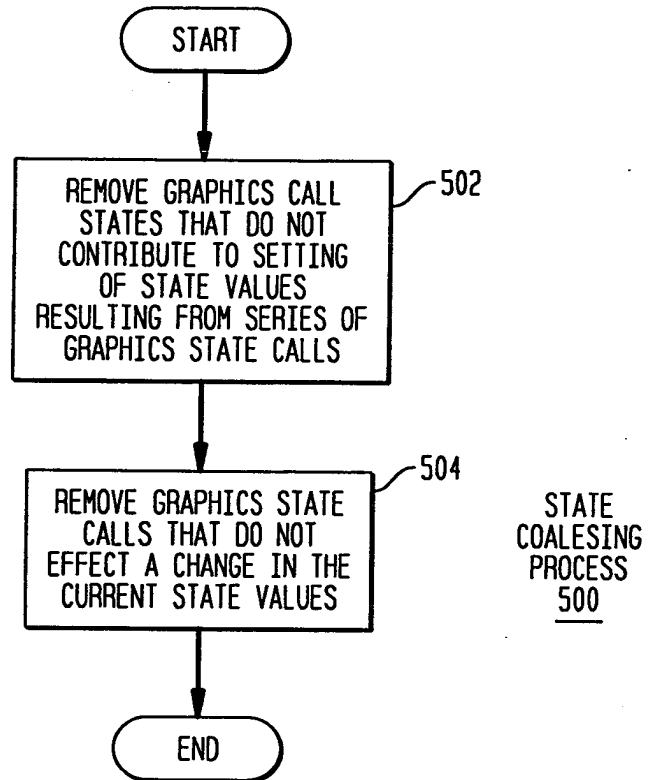
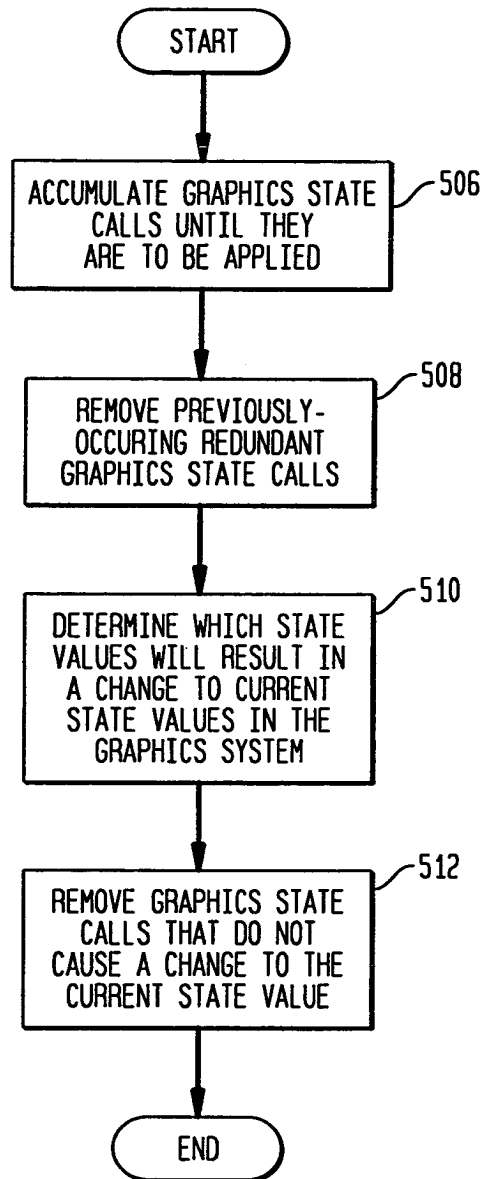


FIG. 5A



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**FIG. 5B**



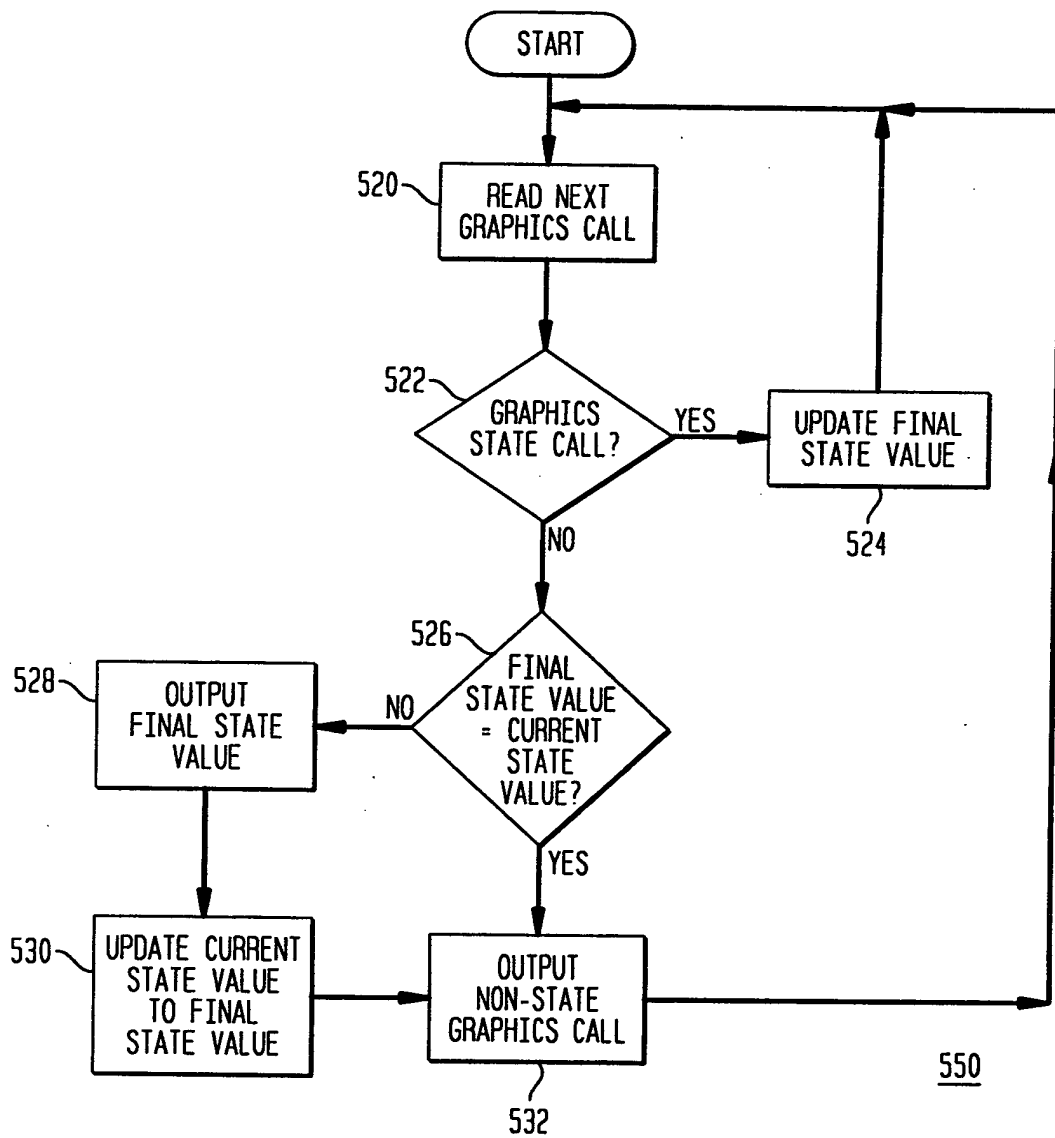
500



**FIG. 5C**

EXEMPLARY COALESCING OF A GRAPHICS CALL SEQUENCE	
550 ORIGINAL GRAPHICS CALL SEQUENCE	554 OPTIMIZED GRAPHICS CALL SEQUENCE
552A glShadeModel(GL_SMOOTH) 552B glEnable(GL_LIGHT0) 552C glEnable(GL_LIGHT1) 552D glEnable(GL_DEPTH_TEST) 552E glEnable(GL_LIGHT0) 552F glDisable(GL_LIGHT1) 552G glDisable(GL_DEPTH_TEST) 552H glShadeModel(GL_FLAT)	556A glShadeModel(GL_FLAT) 556B glEnable(GL_LIGHT0)

FIG. 5D



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FIG. 6A

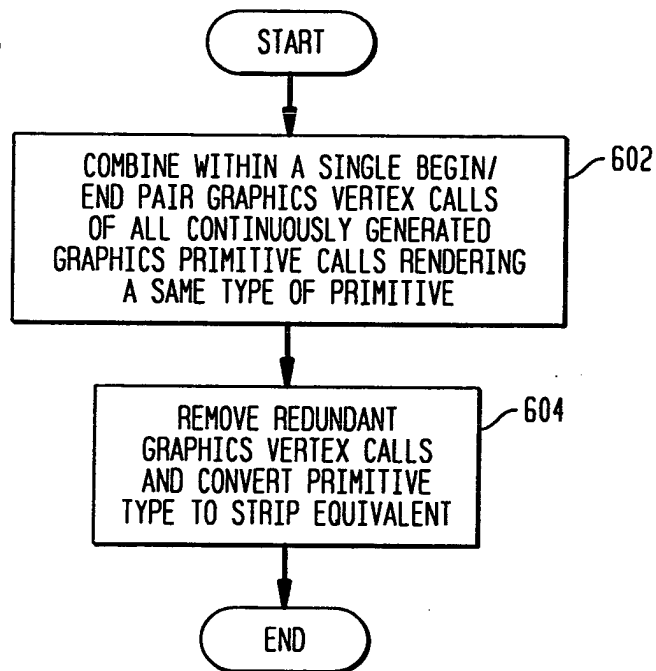
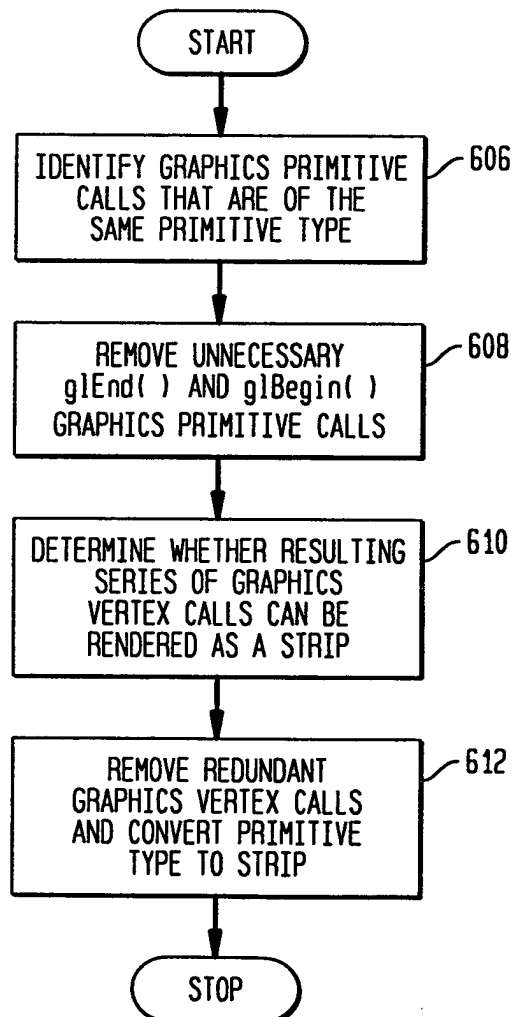


FIG. 6B



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**FIG. 6C**

EXEMPLARY COALESCING OF A GRAPHICS PRIMITIVE CALL SEQUENCE INTO A SERIES OF DISCRETE PRIMITIVES	
ORIGINAL GRAPHICS PRIMITIVE SEQUENCE	OPTIMIZED GRAPHICS PRIMITIVE SEQUENCE
<div>650</div> <div>660</div> <div>652A</div> /*triangle 1*/ <div>652B</div> glBegin(GL_TRIANGLES) <div>652C</div> glVertex( . . . ) <div>652D</div> glVertex( . . . ) <div>652E</div> glVertex( . . . ) glEnd() /*triangle 2*/ <div>652F</div> glBegin (GL_TRIANGLES) <div>652G</div> glVertex( . . . ) <div>652H</div> glVertex( . . . ) <div>652I</div> glVertex( . . . ) <div>652J</div> glEnd()	<div>654</div> <div>656A</div> glBegin(GL_TRIANGLES) /*triangle 1*/ glVertex( . . . ) ~ 656B glVertex( . . . ) ~ 656C glVertex( . . . ) ~ 656D /*triangle 2*/ glVertex( . . . ) ~ 656E glVertex( . . . ) ~ 656F glVertex( . . . ) ~ 656G glEnd() ~ 656H <div>658</div>

**FIG. 6D**

EXEMPLARY COALESCING OF A GRAPHICS PRIMITIVE SEQUENCE INTO A STRIP PRIMITIVE	
ORIGINAL GRAPHICS PRIMITIVE SEQUENCE	OPTIMIZED GRAPHICS PRIMITIVE SEQUENCE
<div>650</div> <div>652A</div> /*triangle 1*/ <div>652B</div> glBegin(GL_TRIANGLES) <div>652C</div> glVertex( . . . ) <div>652D</div> glVertex( . . . ) <div>652E</div> glVertex( . . . ) glEnd() /*triangle 2*/ <div>652F</div> glBegin (GL_TRIANGLES) <div>652G</div> glVertex( . . . ) <div>652H</div> glVertex( . . . ) <div>652I</div> glVertex( . . . ) <div>652J</div> glEnd()	<div>664</div> <div>666A</div> glBegin(GL_TRIANGLES_STRIP) /*triangle 1*/ glVertex( . . . ) ~ 666B glVertex( . . . ) ~ 666C glVertex( . . . ) ~ 666D /*triangle 2*/ glVertex( . . . ) ~ 666E glEnd() ~ 666F

FIG. 6E

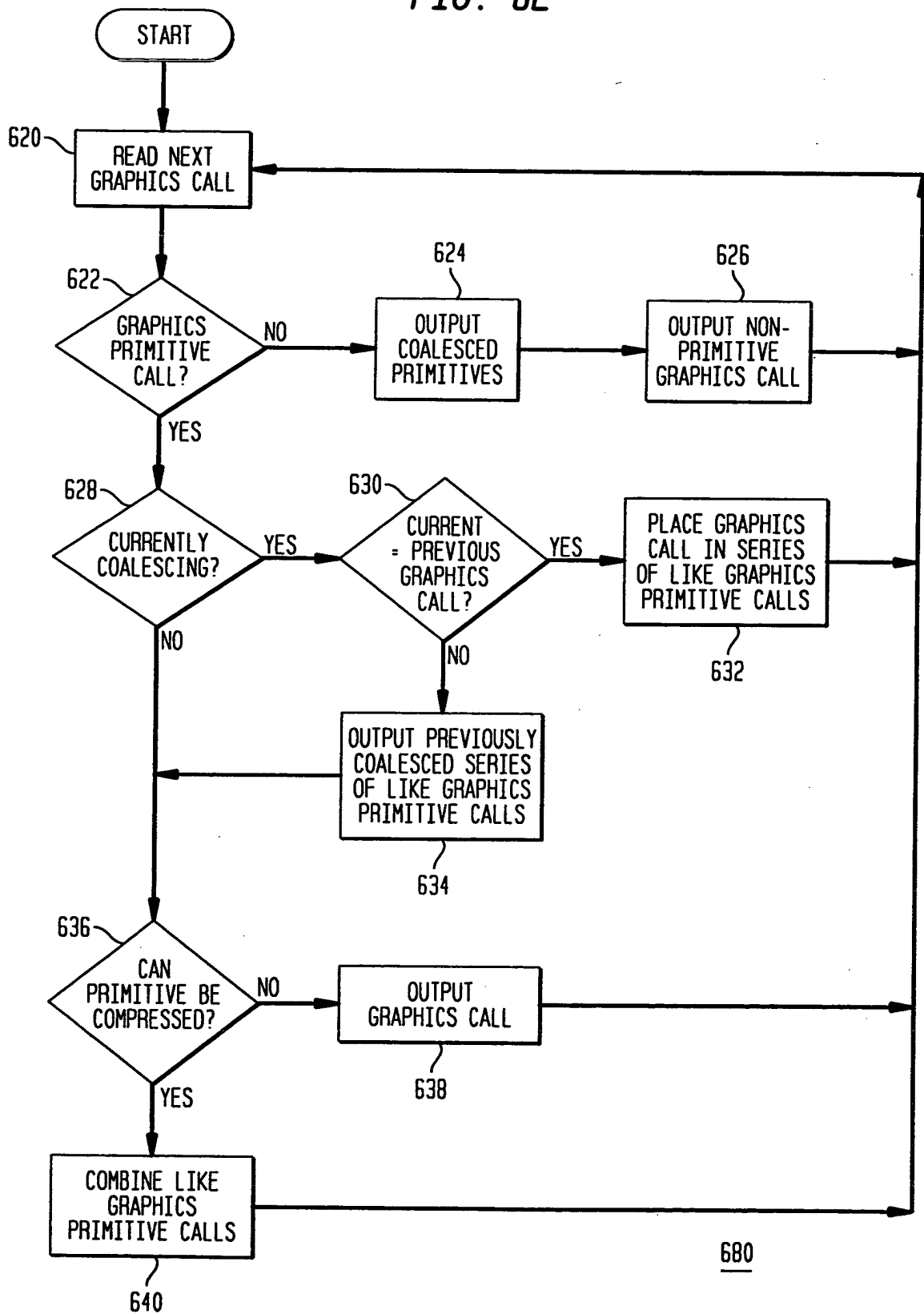


FIG. 7A

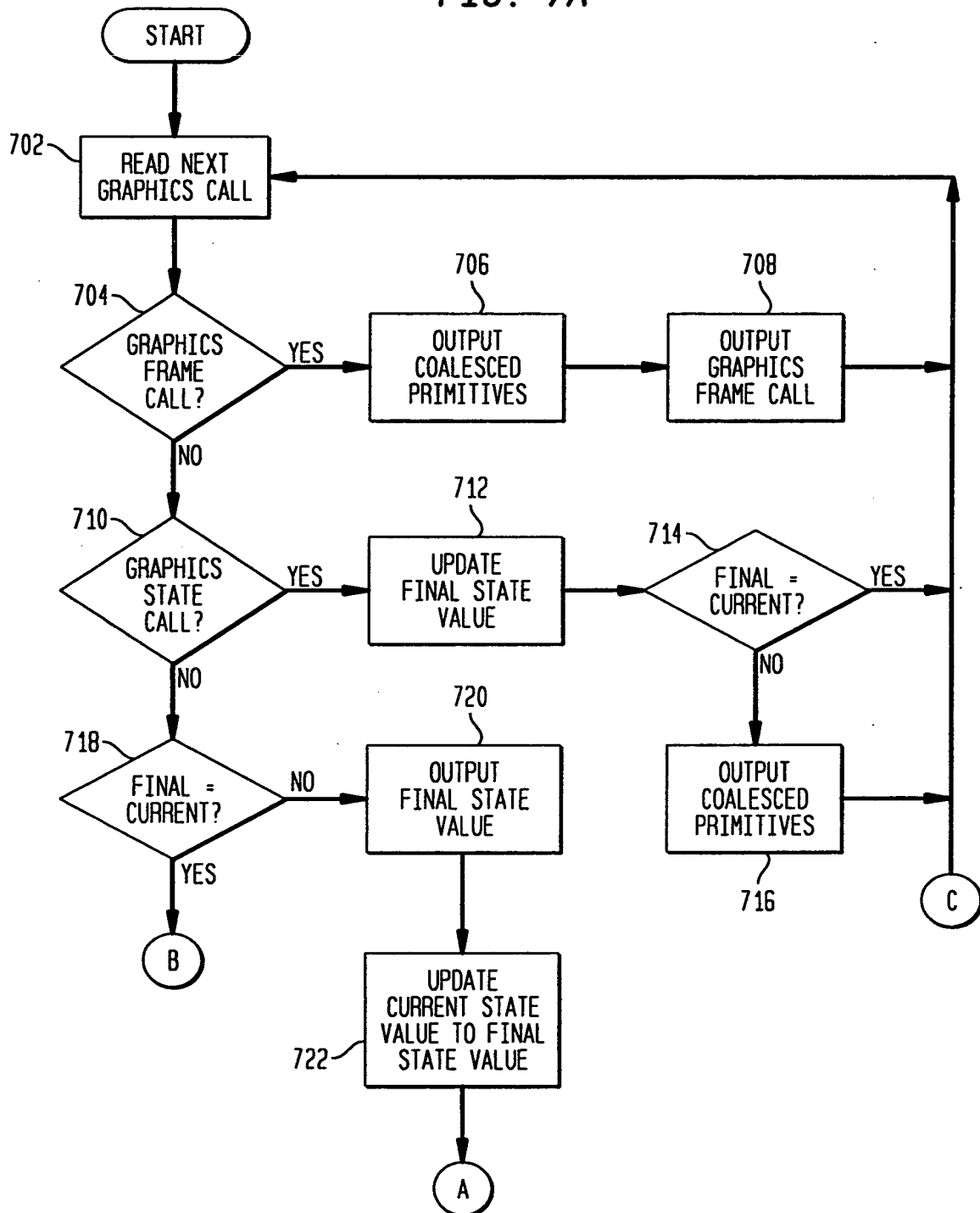


FIG. 7B

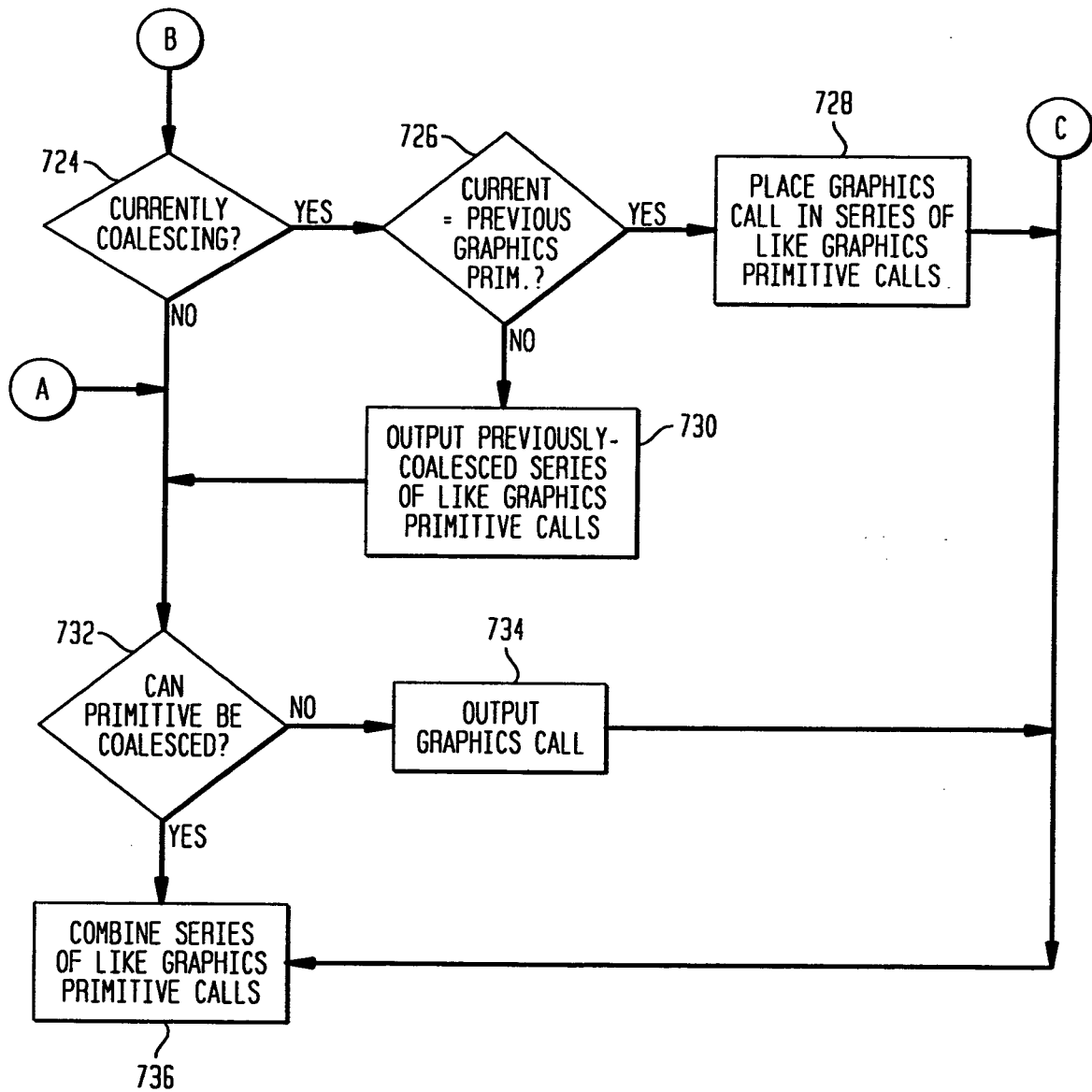


FIG. 8A

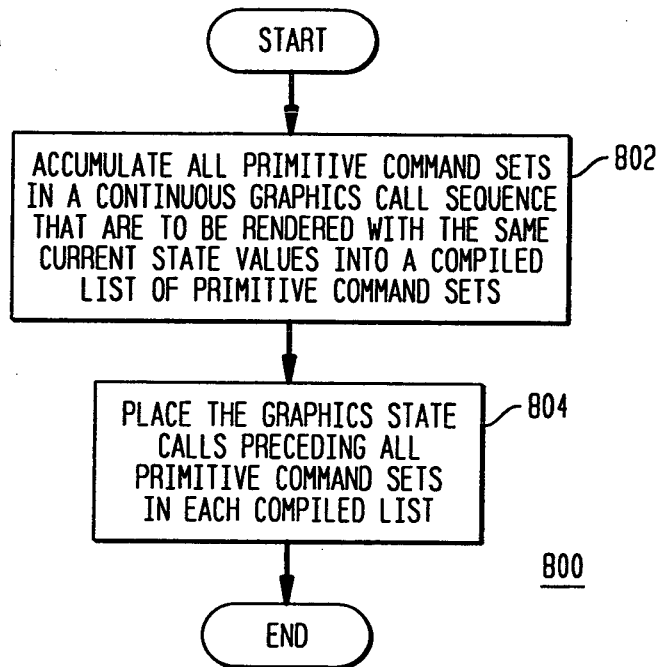


FIG. 8B

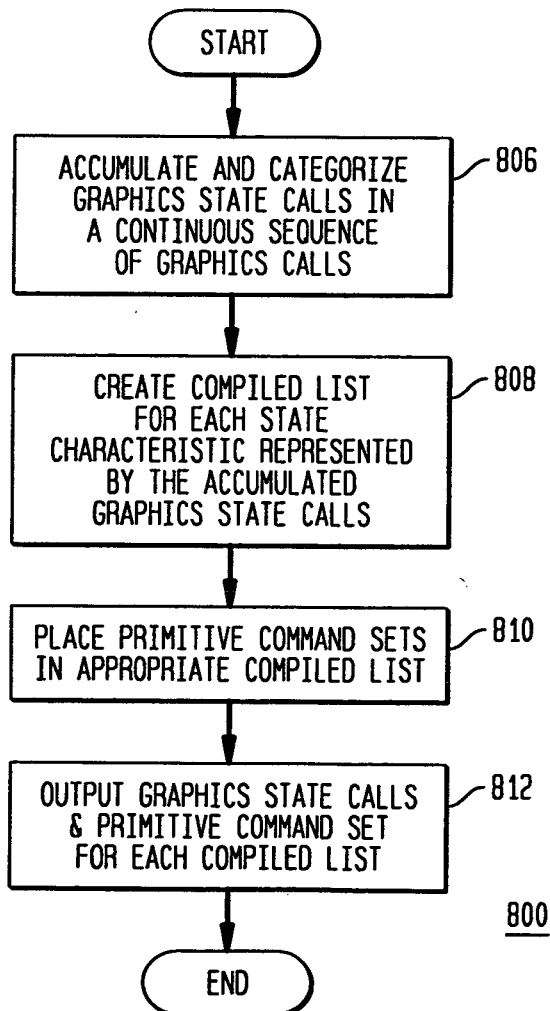




FIG. 8C

EXEMPLARY COMPILATION OF COMMON STATE PRIMITIVE COMMAND SETS		
ORIGINAL GRAPHICS PRIMITIVE SEQUENCE		OPTIMIZED GRAPHICS PRIMITIVE SEQUENCE
860A {	852A glEnable(GL_LIGHTING)	858A {
	852B glBegin(GL_TRIANGLES)	
	852C glVertex( . . . )	
	852D glVertex( . . . )	
	852E glVertex( . . . )	
	852F glEnd()	
860B {	852G glDisable(GL_LIGHTING)	856A {
	852H glBegin(GL_LINES)	
	852I glVertex( . . . )	
	852J glVertex( . . . )	856B {
	852K glEnd()	
860C {	852L glEnable(GL_LIGHTING)	858B {
	852M glBegin(GL_TRIANGLES)	
	852N glVertex( . . . )	
	852O glVertex( . . . )	
	852P glVertex( . . . )	
	852Q glEnd()	
860D {	852R glDisable(GL_LIGHTING)	856C {
	852S glBegin(GL_LINES)	
	852T glVertex( . . . )	
	852U glVertex( . . . )	
	852V glEnd()	

FIG. 8D

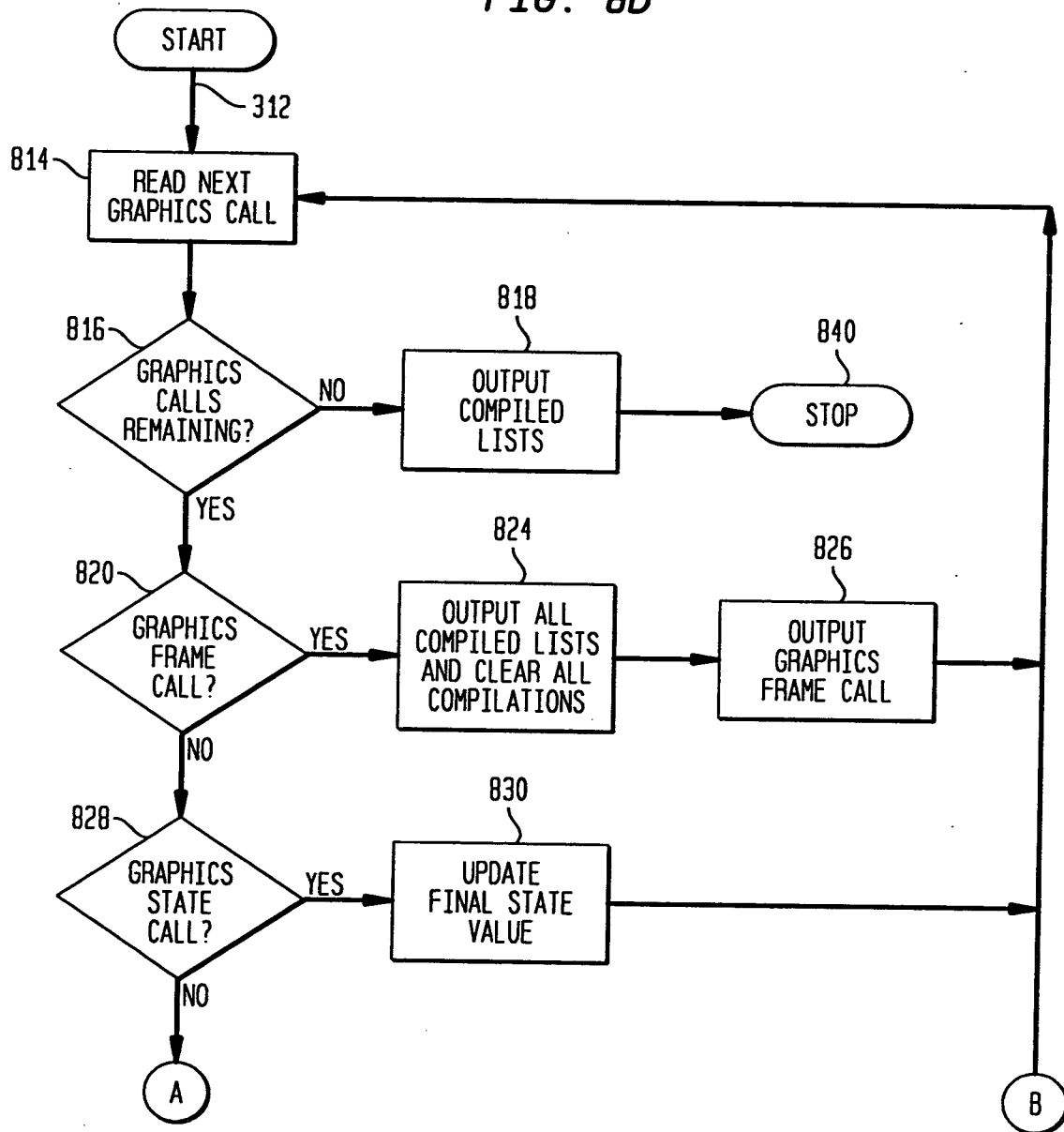


FIG. 8E

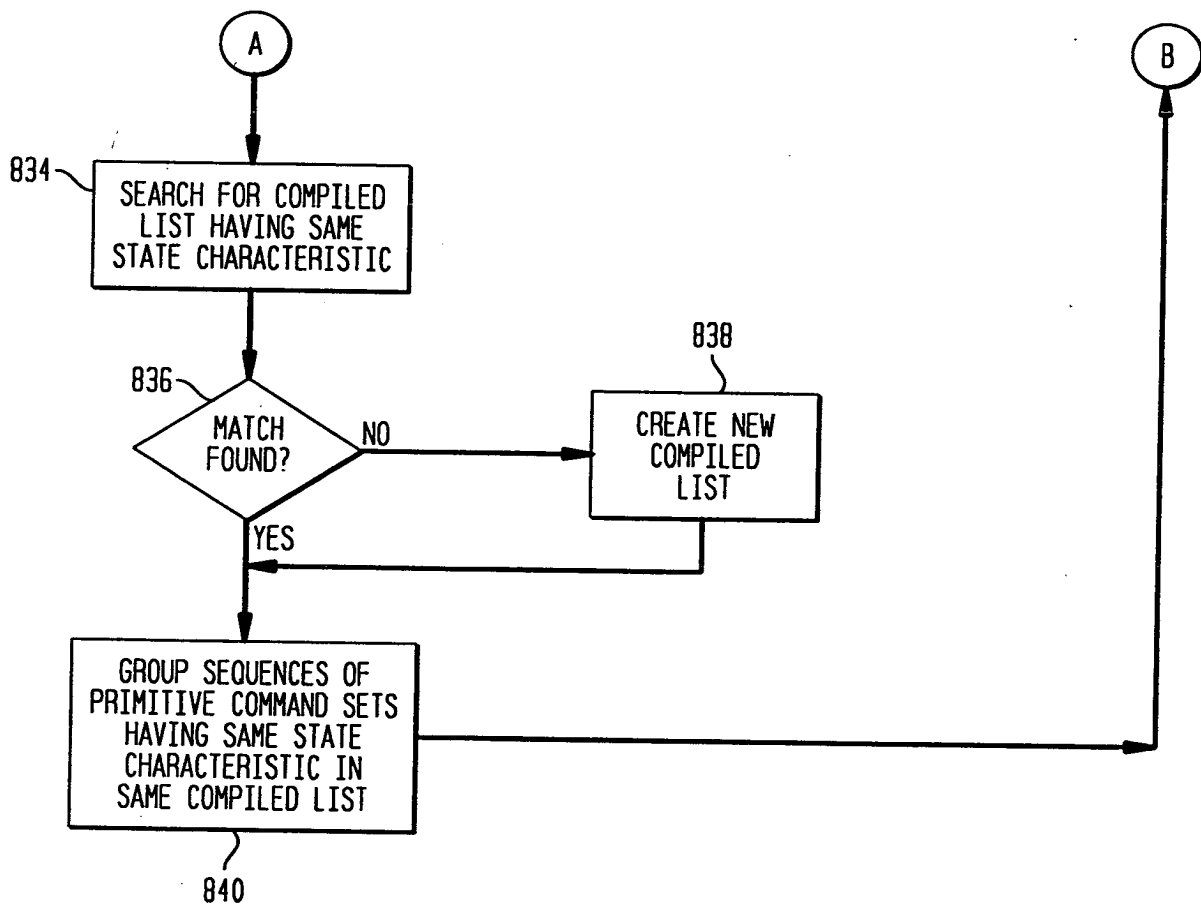


FIG. 9A

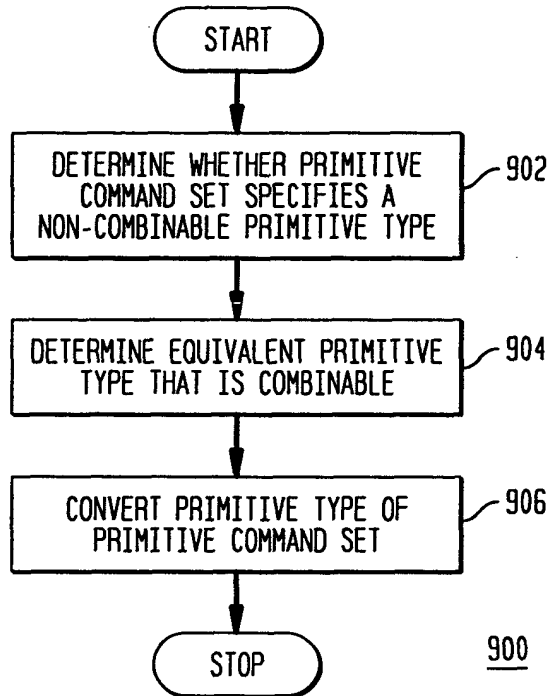
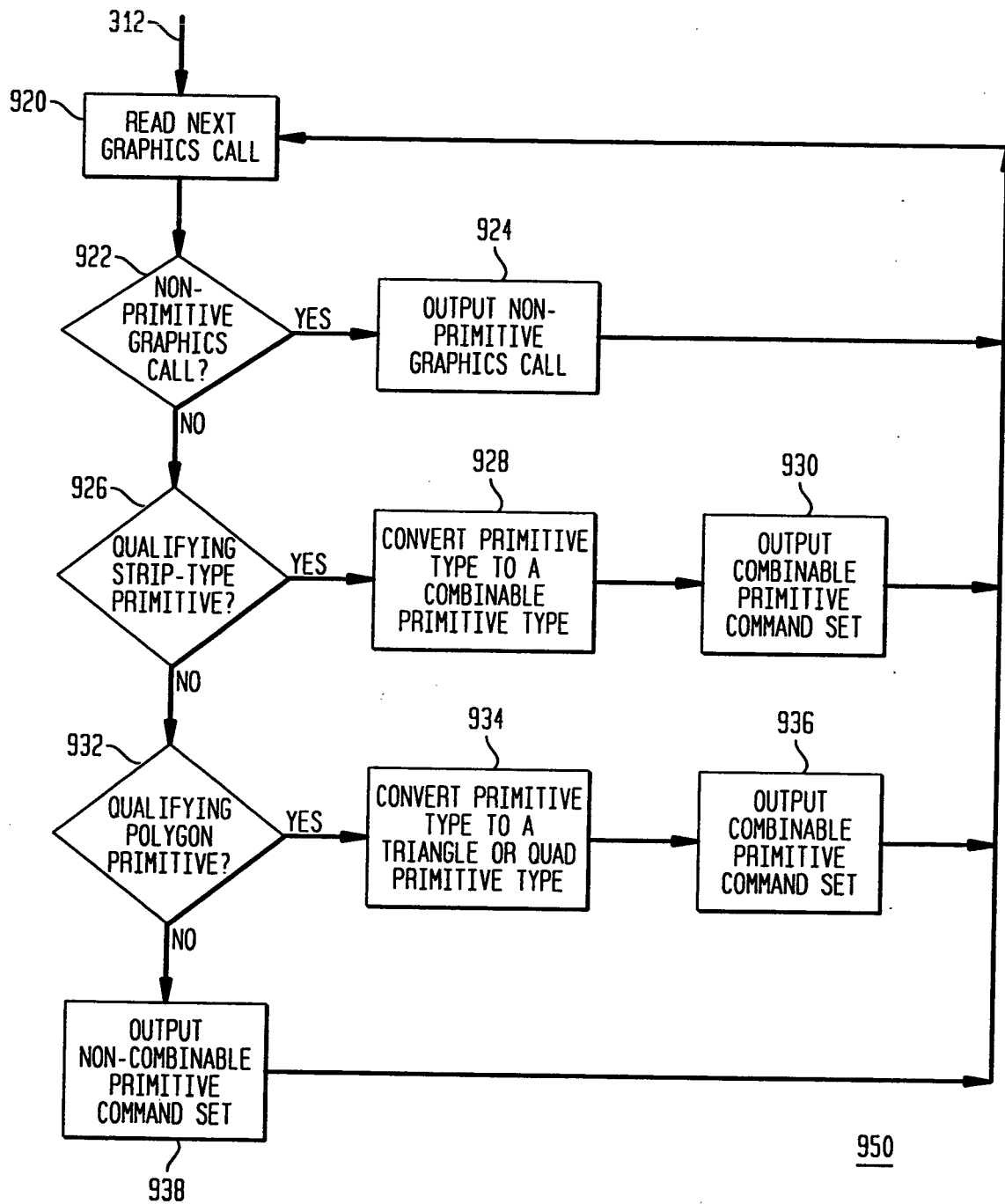


FIG. 9B

EXEMPLARY PRIMITIVE TYPE CONVERSION	
950 ORIGINAL GRAPHICS PRIMITIVE SEQUENCE	980 OPTIMIZED GRAPHICS PRIMITIVE SEQUENCE
952A { <ul style="list-style-type: none"> <li>958A glBegin(GL_POLYGON)</li> <li>954A glVertex( . . . )</li> <li>954B glVertex( . . . )</li> <li>954C glVertex( . . . )</li> <li>glEnd()</li> </ul>	960A { <ul style="list-style-type: none"> <li>glBegin(GL_TRIANGLES)</li> <li>964A glVertex( . . . )</li> <li>964B glVertex( . . . )</li> <li>964C glVertex( . . . )</li> <li>glEnd()</li> </ul> 962A
952B { <ul style="list-style-type: none"> <li>958B glBegin(GL_LINE_STRIP)</li> <li>956A glVertex( . . . )</li> <li>956B glVertex( . . . )</li> <li>glEnd()</li> </ul>	960B { <ul style="list-style-type: none"> <li>glBegin(GL_LINES)</li> <li>966A glVertex( . . . )</li> <li>966B glVertex( . . . )</li> <li>glEnd()</li> </ul> 962B

FIG. 9C



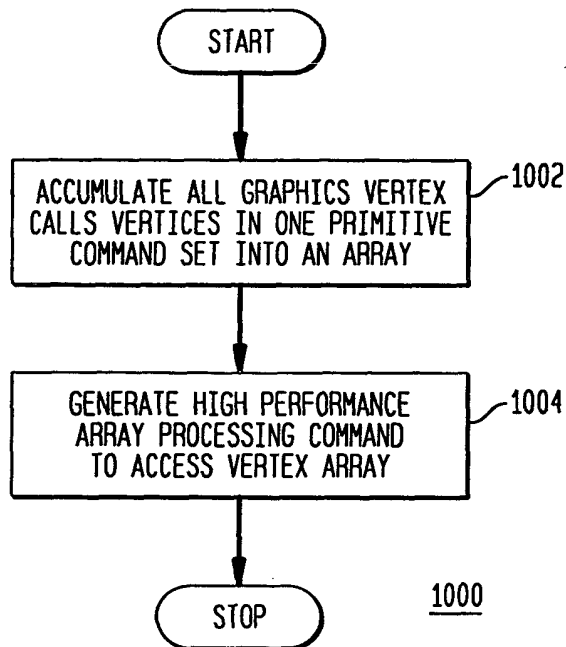
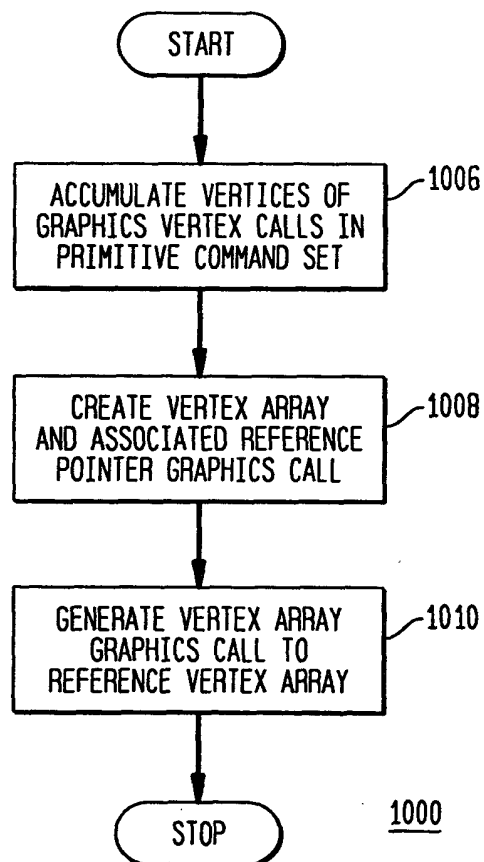
**FIG. 10A****FIG. 10B**

FIG. 10C

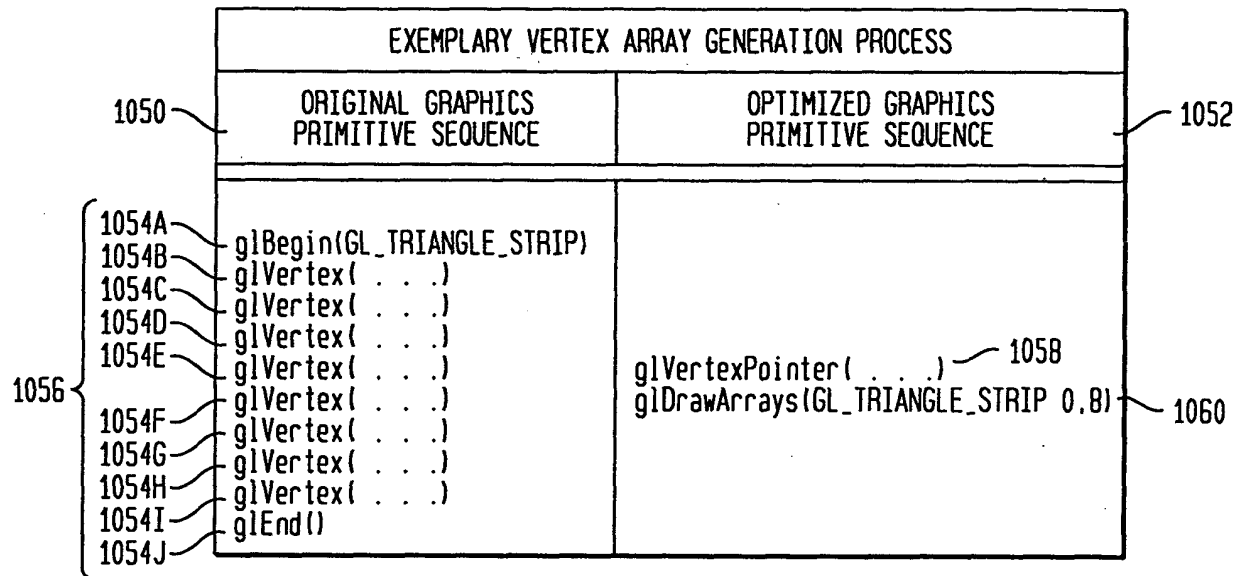
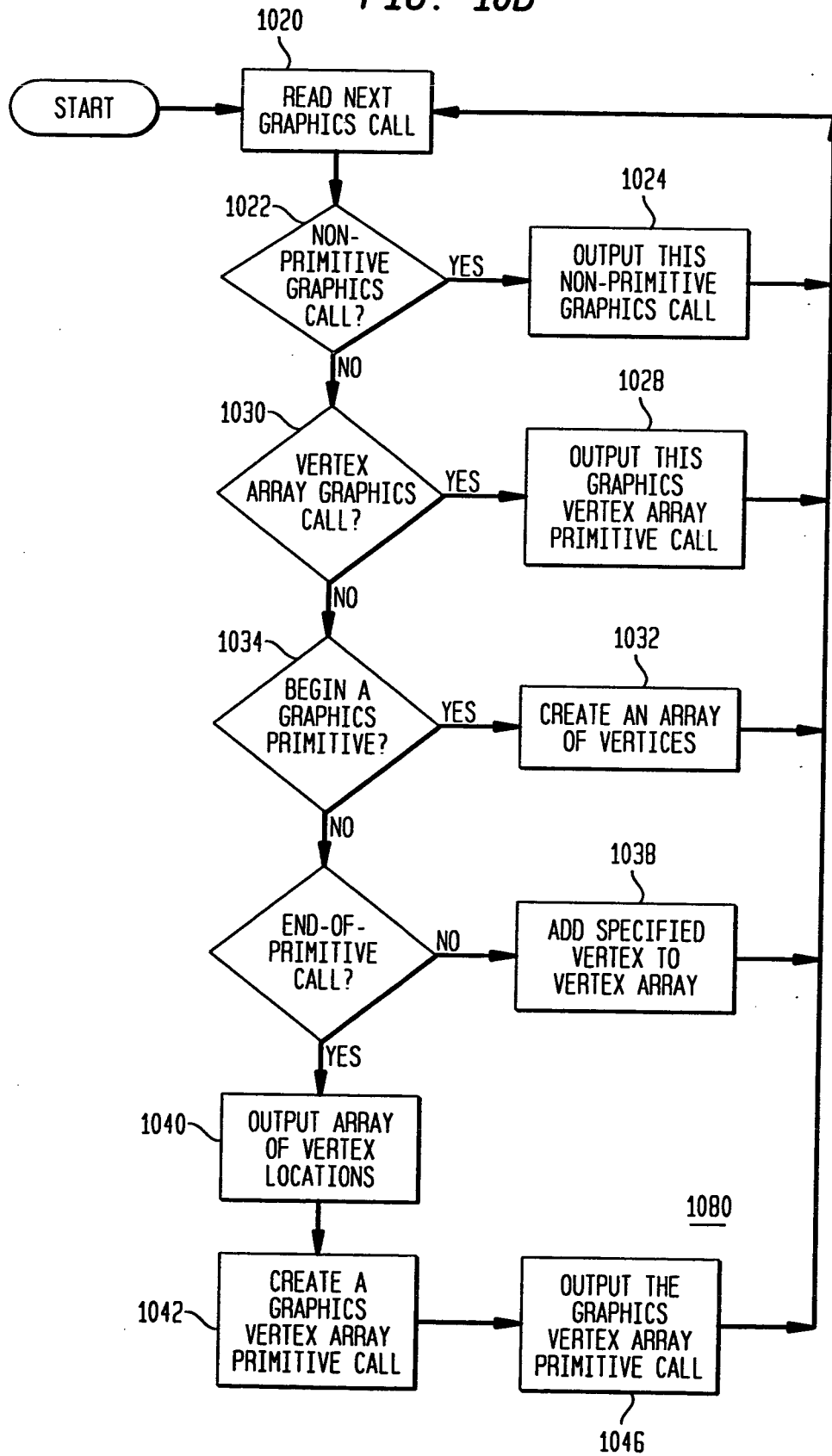
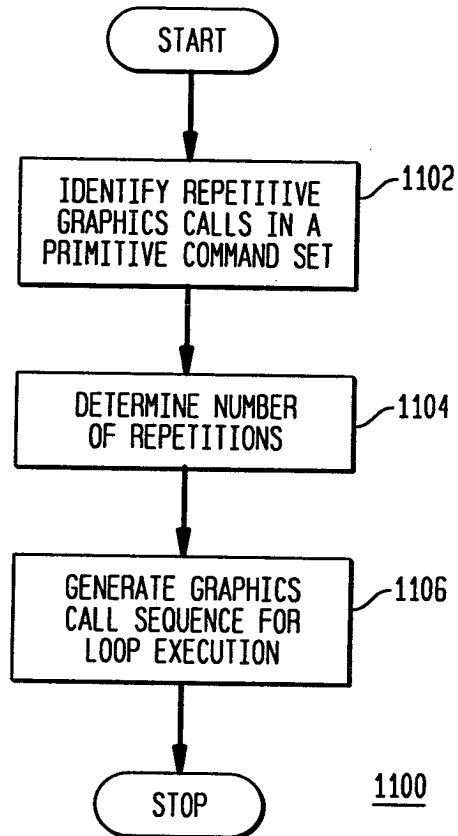


FIG. 10D





**FIG. 11A**

**FIG. 11B**

EXEMPLARY LOOP GENERATION PROCESS	
1150 ORIGINAL GRAPHICS PRIMITIVE SEQUENCE	OPTIMIZED GRAPHICS PRIMITIVE SEQUENCE 1154
1152A glBegin(GL_TRIANGLES) 1152B glNormal( . . . ) 1152C glVertex( . . . ) 1152D glNormal( . . . ) 1152E glVertex( . . . ) 1152F glNormal( . . . ) 1152G glVertex( . . . ) 1152H glEnd()	glBegin(GL_TRIANGLES) ~ 1156A for (i=0; i<3; i++) ~ 1156B { glNormal( . . . ) ~ 1156C glVertex( . . . ) ~ 1156D } glEnd() ~ 1156E

FIG. 11C

